back electrode forming perforations therein corresponding to acoustic holes and the other of the electrodes is a diaphragm, characterized in that a silicon nitride film is provided on the side adjacent a base of the substrate with respect to a membrane acting as the diaphragm formed on the substrate.

[2] A sound detecting mechanism as claimed in Claim 1 characterized in that the substrate includes a support substrate having a monocrystal silicon substrate acting as the base thereof, wherein an SOI wafer having the silicon nitride film held between an active layer and a built-in oxide film layer is used as the support substrate whereby the active layer forms the diaphragm.

[3] A sound detecting mechanism as claimed in Claim 1 characterized in that the substrate includes a support substrate having a monocrystal silicon substrate acting as the base thereof, wherein an SOI wafer having the silicon nitride film held between a built-in oxide film layer and the base is used as the support substrate.

[4] A sound detecting mechanism as claimed in Claim 1 characterized in that the substrate includes a support substrate having a monocrystal silicon substrate, wherein a silicon oxide film is formed on the support substrate, the silicon nitride film is formed on the silicon oxide film, and a silicon film is further formed on the silicon nitride film.

[5] A sound detecting mechanism as claimed in Claim 1 characterized in that the substrate includes a support substrate having a monocrystal silicon substrate acting as the base thereof, wherein a laminated layer consisting of a silicon oxide film and the silicon nitride film is formed between the membrane acting as the diaphragm and the

support substrate, wherein the thickness of the silicon nitride film is selected within the range of 0.1μm through 0.6μm, and wherein a film thickness ratio, (silicon oxide film)/(silicon nitride film)=R, is determined as 0<R<=4.

[6] A sound detecting mechanism as claimed in any one of Claims 2 through 5 characterized in that a silicon substrate of (100) orientation is used as the monocrystal silicon substrate.

[7] A sound detecting mechanism as claimed in Claim 1 characterized in that impurity diffusion treatment is executed on the diaphragm.

[8] A method of manufacturing a sound detecting mechanism comprising a pair of electrodes forming a capacitor on a monocrystal silicon substrate in which one of the electrodes is a back electrode forming perforations therein corresponding to acoustic holes and the other of the electrodes is a diaphragm, the method being characterized by forming a silicon oxide film on a top surface of the monocrystal silicon substrate, forming a silicon nitride film on the silicon oxide film, forming a polycrystal silicon film acting as the diaphragm on the silicon nitride film, forming a silicon oxide film acting as a sacrificial layer on the polycrystal silicon film, forming a polycrystal silicon film acting as the back electrode on the silicon oxide film, forming a pattern of the polycrystal silicon film acting as the back electrode in a desired shape by photolithographic technique, removing an area extending from the back side of the monocrystal silicon substrate to a lower portion of the diaphragm by etching, removing the silicon oxide film and the silicon nitride film present in the lower portion of the diaphragm by hydrofluoric acid, and removing the silicon oxide film acting as the

sacrificial layer.